

## ABSTRACT OF THE DISCLOSURE

5 APPARATUS AND METHOD OF MAKING A REDUCED SENSITIVITY SPIN  
VALVE SENSOR APPARATUS IN WHICH A FLUX CARRYING CAPACITY  
IS INCREASED

Apparatus and methods for reducing the sensitivity  
of spin valve sensor read heads for magnetic tape  
10 applications are provided. The apparatus and methods  
compromise the large output gain derived from using state  
of the art spin valve sensors in order to reduce the flux  
capture and thus, the signal distortion in the spin valve  
sensor. In order to provide a reduced sensitivity spin  
15 valve sensor, one or more of the basic sensitivity of the  
spin valve, the flux carrying capability of the free  
layer, and the flux injection efficiency of the spin  
valve head structure are modified to reduce the flux  
capture by the sensing layer.